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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,474	10/11/2001	Michael Guess	ONF100/4-CONUS	9742
23932	7590	03/14/2006	EXAMINER	
JENKENS & GILCHRIST, PC 1445 ROSS AVENUE SUITE 3200 DALLAS, TX 75202			NGO, NGUYEN HOANG	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/975,474

Applicant(s)

GUESS ET AL.

Examiner

Nguyen Ngo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This communication is in response to the amendment of December 27, 2005. All changes made to the Specification, and Claims have been entered. Accordingly, Claims 1-18 are currently pending in the application.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4, 5, 6, 7, 9, 10, 13, 14, 15, 16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanekar et al. (US 6751191).

**Regarding Claims 1 and 10**, Kanekar et al. discloses a network failover transition system for a plurality of ports communicating over a VLAN (Fig. 5, col 7, lines 18-48 and Fig. 8, col 9, lines 24-65) comprising:

a first router (switch) having a master mode and a standby mode, and configured to provide switching between said ports while in said master mode (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be designated to be a

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"master" (active) or "slave" (standby). Therefore, each router has both master and standby modes);

a second router (switch) having a master mode and a standby mode, and configured to provide switching between said ports while is said master mode, wherein said second router (switch) is in said standby mode when said first router (switch) is in said master mode, and said second router (switch) is in said master mode when said first router (switch) is in said standby mode (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be determined to be a "master" (active) or "slave" (standby). Therefore, each router has both master and standby modes and when one is designated as master (actively forwarding packets), the other is considered as the slave which functions in standby mode);

wherein said master router (switch) is configured, upon a detection of a network failure, to restart auto-negotiation of said ports, and to transition to said standby mode; and wherein said second router (switch) is configured, upon said detection of a network failure, to transition to said master mode (Fig. 12A and Fig. 12C, col 12, lines 6-67 and col 13, lines 1-26. Upon failure of the master router, the slave router takes over as the master router and the master router transitions into the role of the slave (standby) router. Auto-negotiation process starts upon failure of the master router thereby initiating the slave router to modify its layer 2 table entries to replace references to the master with references to the slave such that each entry is mapped to the slave rather than the master. Once the slave's layer 2 table has been modified, entries associated with the master may be identified and removed from the layer 3 table so that the source

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of the packet is correctly identified in the packet header. In other words, the layer 3 shortcuts established by the master are purged from the layer 3 table. When an entry for a particular flow is not in the layer 3 table, the packet is routed via a router associated with that flow. More particularly, an entry in the layer 2 table (or a separate mapping table) is matched with the destination MAC address as specified in the packet header. In this manner, the outgoing VLAN and outgoing port for a specified destination MAC address may be obtained from information learned from previously received incoming packets).

Kanekar et al. discloses a method of failover transitioning a VLAN with a plurality of ports (Fig. 5, col 7, lines 18-48 and Fig. 8, col 9, lines 24-65) comprising:

establishing a first router (switch) having a master mode and a standby mode as a master router (switch); configuring said master router (switch) to provide switching between said ports; (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be designated as a "master" (active) or "slave" (standby). Therefore, each router has both master and standby modes);

establishing a second router (switch) having a master mode and a standby mode as a standby switch (Fig. 5 and Fig. 6, col 8, lines 15-40. As disclosed, any one of the two routers can be determined to be a "master" (active) or "slave" (standby). Therefore, each router has both master and standby modes and when one is designated as master (actively forwarding packets), the other is considered as the slave which functions in standby mode);

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detecting a communication failure on said VLAN (col 7, lines 18-31 and Fig. 8, col 9, lines 49-65);

restarting auto-negotiation of said ports with said master router (switch);  
transitioning said first router (switch) to standby mode, whereby said first router (switch) becomes said standby router (switch); and transitioning said second router (switch) to master mode, whereby said second router (switch) becomes said master router (switch) (Fig. 12A and Fig. 12C, col 12, lines 6-67 and col 13, lines 1-26. Upon failure of the master router, the slave router takes over as the master router and the master router transitions into the role of the slave (standby) router. Auto-negotiation process starts upon failure of the master router thereby initiating the slave router to modify its layer 2 table entries to replace references to the master with references to the slave such that each entry is mapped to the slave rather than the master. Once the slave's layer 2 table has been modified, entries associated with the master may be identified and removed from the layer 3 table so that the source of the packet is correctly identified in the packet header. In other words, the layer 3 shortcuts established by the master are purged from the layer 3 table. When an entry for a particular flow is not in the layer 3 table, the packet is routed via a router associated with that flow. More particularly, an entry in the layer 2 table (or a separate mapping table) is matched with the destination MAC address as specified in the packet header. In this manner, the outgoing VLAN and outgoing port for a specified destination MAC address may be obtained from information learned from previously received incoming packets).

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**Regarding Claims 2 and 11**, Kanekar et al. discloses wherein said VLAN is part of an Ethernet Network (col 18, lines 46-50 and Fig. 13A, col 14, lines 30-48. The MAC address indicated in Fig. 13A is connected with a VLAN. MAC addressing scheme is associated with an Ethernet network).

**Regarding, Claims 4 and 13**, Kanekar et al. discloses wherein said first and second routers (switches) are Layer 2 switches (col 2, lines 52-53).

**Regarding Claims 5 and 14**, Kanekar et al. discloses wherein said ports are Layer 3 devices (col 4, lines 8-11. It is disclosed that entries in the slave's layer 3 shortcut table are selected and removed gradually and that the entries may be removed according to port\_number or other criteria. Hence, ports can be associated with Layer 3 devices).

**Regarding Claims 6 and 15**, Kanekar et al. discloses wherein at least one of said ports utilizes Address Resolution Protocol (col 6, lines 30-39).

**Regarding Claims 7 and 16**, Kanekar et al. discloses wherein all of said ports utilize Address Resolution Protocol (col 6, lines 30-39, lines 47-50. Each router can be associated with more than one port (Fig. 3) and therefore have the ability to connect to multiple VLAN. The configuration as discussed indicates type of VLAN to which each port belongs is shown in Layer 2 Table (Fig. 13A). Hence, inherently all ports associated with the VLAN respond to ARP queries).

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**Regarding Claims 9 and 18**, Kanekar et al. discloses wherein said network failure is detected using port track (Fig. 11 A, col 10, lines 56-67 and col 11, lines 1-25. Port tracking is associated with a synchronization task that runs in master/slave mode and the master sends to the slave synchronized state information to synchronize the port states and forward delay time. By way of example, the state of each port may indicate that the link is up or down, that the port is blocked, listening, or forwarding).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanekar et al. (US 6751191) in view of Extreme Networks Inc.



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**Regarding Claims 3 and 12**, Kanekar et al. fails to disclose wherein said VLAN utilizes Extreme Networks Standby Router Protocol. Extreme Networks, Inc. discloses the Extreme Networks Standby Router Protocol (ESRP) that allows multiple switches to provide redundant routing services to users (Chapter 10, Pages 10-1 to 10-20). It is further shown that ESRP is router protocol adaptable to utilizing said first switch (master) and said second switch (standby), said router protocol further comprising a set of mechanism to effectuate said transition of first switch to standby mode (Chapter 10). Therefore, it would have been obvious to one skilled in the art to apply this protocol as taught by Extreme Networks, Inc. in the router used by Kanekar et al. to perform layer 2 redundancy in addition to layer 3 routing redundancy that can be used in combination or independently.

6. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanekar et al. (U.S. Patent No. 6,751,191) in view of Coile et al (U.S. Patent No. 6,108,300).

**Regarding Claim 8 and 17**, Kanekar et al. fails to disclose wherein network failure is detected using ping track. Coile et al. however discloses a ping test that counts all received packets for up to a predetermined amount of time and if any packets are received at any time during this interval the interface is considered operational and testing stops (Figure 6 (step 640), col 11, lines 10-18). Therefore, it would have been obvious to one skilled in the art to use the ping test as taught by Coile et al. in the failure detection mechanism of Kanekar et al. to check for connectivity and also provide a

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means for health check of the state of each port in order to efficiently determine when to switch between a master mode or a standby mode.

### ***Response to Arguments***

7. Applicant's arguments filed December 27, 2005 have been fully considered but they are not persuasive.

8. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., of a switch which is a piece of hardware that creates an isolated collision domain between network devices, being a Layer 2 switch, or a Layer 3 switch) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

9. The applicant further submits that Kanekar does not teach of a first switch and a second switch. The Examiner posits that it is not unreasonable to interpret the routers disclosed by Kanekar as switches. Kanekar further discloses it is common to provide redundancy through the use of multiple routers. However, when a primary router fails, there is typically a "switchover time" that is required for the backup router to take over the functions of the primary router and as a result, such attempts to provide redundancy in switches suffer from a large switchover time (col1 lines 50-64). It should thus be apparent that a router be interpreted as a switch. Kanekar further discloses the master and slave each include a switching processor (col2 lines 49-51).

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10. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kanekar fails to disclose wherein network failure is detected using ping track. Coile however discloses a ping test that counts all received packets for up to a predetermined amount of time and if any packets are received at any time during this interval the interface is considered operational and testing stops (Figure 6 (step 640), col 11, lines 10-18). Therefore, it would have been obvious to one skilled in the art to use the ping test as taught by Coile et al. in the failure detection mechanism of Kanekar et al. to check for connectivity and also provide a means for health check of the state of each port in order to efficiently determine when to switch between a master mode or a standby mode. It should further be noted that Extreme Networks Inc. further discloses of ESRP ping tracking to track the connectivity using a ping and thus relinquishes master status and remains in standby mode if a ping keepalive fails three consecutive times. As seen, there is a need and thus motivation to determine the connectivity of a switch in order to determine the mode of a switch.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

N.N.  
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**Nguyen Ngo**

United States Patent & Trademark Office  
Patent Examiner AU 2663  
(571) 272-8398



**RICKY Q. NGO**  
**SUPERVISORY PATENT EXAMINER**